

## **REMARKS**

No amendments to the claims are being made in the current Response. Applicants have included the Claim Listing of the currently pending claims for the Examiner's convenience.

### AMENDMENTS TO THE DRAWINGS

As noted in the Response filed on 2 February 2007, Applicants submitted drawing amendments with the Amendment and Response filed on 17 August 2006. The Examiner has not indicated in either the Office Action dated 2 November 2006 or in the Office Action dated 12 February 2007 whether the drawings filed on 17 August 2006 have been accepted. Applicants respectfully request that the Drawing Amendments filed on 17 August 2006 be accepted and that the Examiner so indicate in the next correspondence.

### INFORMATION DISCLOSURE STATEMENTS

Applicants thank the Examiner for considering the references cited in the Supplemental Information Disclosure Statement filed on 2 February 2007 and for returning initialed copies of the Form PTO-1449 to the Applicants.

As noted in the Response filed on 2 February 2007, the Applicants also submitted an Information Disclosure Statement on 30 December 2005. With the Office Action mailed on 27 April 2006, the Examiner attached a copy of Form PTO-1449 which the Applicants had submitted with the Information Disclosure Statement filed on 30 December 2005. The Examiner initialed all U.S. patent documents except those appearing on page 4/9 of Form PTO-1449 filed on 30 December 2005. These U.S. patent documents were neither initialed as having been considered nor crossed out to indicate that they were not considered. Applicants once again respectfully request that the Examiner consider these references and so indicate by returning an initialed copy of page

4/9 of Form PTO-1449 filed on 30 December 2005 to the Applicants with the next correspondence. For the Examiner's reference, a copy of Form PTO-1449 filed on 30 December 2005, which was returned by the Examiner with the Office Action mailed on 27 April 2006, is attached to this Response.

### CLAIMS

Claims 1-16 are currently pending in the application. All pending claims stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Palmaz et al. (WO 01/74274) in combination with various other references. Applicants traverse these rejections and respectfully submit that none of the cited references, either alone or in combination, render the claimed invention obvious. Applicants request that the Examiner reconsider and withdraw these rejections in view of the remarks presented herein.

Applicants note that, in the previous Office Action dated 2 November 2006, the Examiner rejected all pending claims under 35 U.S.C. § 103(a) as being unpatentable over Palmaz et al. (WO 01/74274) in view of Hess (WO 92/19310) and in combination with various other references. In the current Office Action mailed 12 February 2007, the Examiner has withdrawn Hess as a § 103(a) reference. Nonetheless, the Examiner has maintained all of the same rejections under § 103(a) without relying on Hess. Applicants do not understand how these § 103(a) rejections can logically be maintained. For example, in the Office Action mailed 2 November 2007, the Examiner rejected claims 1-4 and 13-15 under 35 U.S.C. § 103(a) as being unpatentable over Palmaz et al. in view of Hess. After consideration of the Applicants' Response filed on 2 February 2007, the Examiner withdrew Hess as a § 103(a) reference. In the current Office Action, however, the Examiner has rejected claims 1-4 and 13-15 under 35 U.S.C. § 103(a) as being unpatentable over Palmaz et al. alone. If Palmaz et al. in combination with Hess was insufficient to render the claimed invention obvious, the Applicants do not understand how Palmaz et al. alone could possibly render the claimed invention obvious.

The situation is similar for each of the Examiner's rejections in the current Office Action. For each rejection, the Examiner has maintained the same rejection that was presented in Office Action mailed 2 November 2007, except with the withdrawal of Hess as a reference. In each case, this appears equally illogical to the Applicants. If some combination of references, which includes Hess, is insufficient to render claims obvious, it is logically impossible for a subset of the same combination of references, now excluding Hess, to render those same claims obvious. The undersigned Attorney for Applicants notes that she has tried to contact the Examiner to discuss this issue, but has been unsuccessful.

A. Rejection of Claims 1-4 and 13-15 under 35 U.S.C. § 103(a) as being unpatentable over Palmaz et al.

As stated in the MPEP:

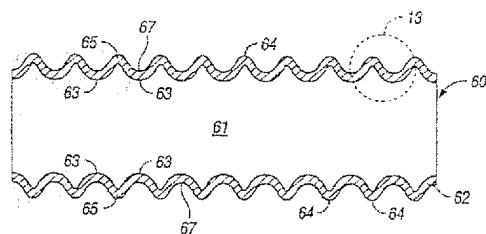
To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). (MPEP 706.02(j), underlining added for emphasis.)

Applicants submit that the Examiner's rejection of claims 1-4 and 13-15 is improper because the Examiner has failed to provide a clear suggestion or motivation that would have led one of ordinary skill in the art to combine or to modify the prior art in the manner suggested by the Examiner. First, the Applicants note that the Examiner relies on a single prior art reference, Palmaz et al., to support this obviousness rejection. As

discussed above, Palmaz et al. in view of Hess was insufficient to render the rejected claims obvious. To the Applicants, it appears to be logically impossible for Palmaz et al. alone to render the same claims obvious.

The Examiner further asserts that “[i]t would be obvious to one of ordinary skill in the art that the use of a plurality of single elements that each form a circle would result in a medical graft having continuous circumferential undulations.” The Applicants respectfully disagree, and, in fact, the Applicants do not understand the Examiner’s assertion. The Examiner specifically states that “Palmaz et al. does not disclose the support arranged specifically as having continuous circumferential undulations.” And the Examiner fails to point to anything, either within the cited prior art or within the knowledge of one of ordinary skill in the art, to support or explain his assertion.

To illustrate this point more clearly, several figures are reproduced below. The first figure illustrates one embodiment of the Applicants’ inventive graft as shown in Figure 12 of the pending application.



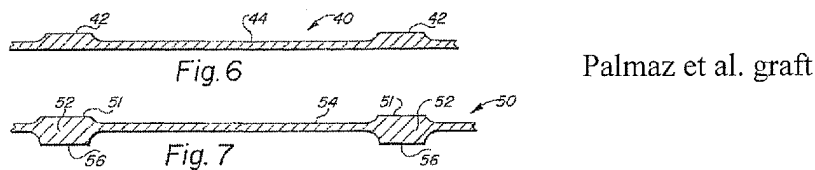
*Fig. 12*

Applicants' graft

As recited in independent claim 1, the claims of the present application are directed to a graft with a “body member having a plurality of continuous circumferential undulations”. Similarly, independent claim 13 recites “a generally cylindrical substrate having a plurality of circumferentially extending continuous undulations with peaks and valleys, patterned along at least a portion of a longitudinal axis of the generally cylindrical substrate.” The application explains that “[t]he graft body member 62 has first and second wall surfaces forming luminal and abluminal surfaces of the graft body member

and a plurality of corrugations or pleats 64 forming an undulating pattern of peaks 65 and valleys 67 in wall surfaces of the graft body member.” (Paragraph [0071].)

In contrast, and as acknowledged by the Examiner, the body member described in Palmaz et al. (illustrated in Figures 6 and 7 of Palmaz et al. and reproduced below) does not include a plurality of continuous circumferential undulations.



The Examiner has failed to provide an explanation of how Palmaz et al. could render the claimed invention obvious. Palmaz et al. does not provide each element of the claimed invention. Palmaz et al. does not disclose continuous circumferential undulations, nor does Palmaz et al. disclose a “body member having a plurality of continuous circumferential undulations with peaks and valleys, formed in each of the luminal wall and abluminal wall surfaces of the body member.”

In summary, the Examiner has failed to establish a *prima facie* case of obviousness. Applicants respectfully request that the Examiner withdraw the 35 U.S.C. § 103(a) rejection of claims 1-4 and 13-15.

B. Rejection of Claims 5, 12, and 16 under 35 U.S.C. § 103(a) as being unpatentable over Palmaz et al. in view of Van Schie et al.

Claims 5, 12, and 16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Palmaz et al. in view of Van Schie et al. (U.S. Patent No. 6,974,471).

As stated in the MPEP:

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). ... If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). (MPEP § 2143.03, underlining added for emphasis.)

As discussed above, the Examiner has failed to established a *prima facie* case of obviousness with respect to independent claims 1 and 13. Since independent claims 1 and 13 are nonobvious in view of the prior art, all claims depending from independent claims 1 and 13 are also nonobvious. Claims 5 and 12, which depend from independent claim 1, and claim 16, which depends from independent claim 13, are, therefore, also nonobvious.

Also as discussed above, the combination of Palmaz et al., in view of Hess, further in view of Van Schie et al., was insufficient to render rejected claims 5, 12, and 16 obvious. Applicants respectfully submit that they do not understand the Examiner's argument that Palmaz et al., in view of Van Schie et al., without Hess, can render the same claims obvious.

Applicants further note that the suture material referred to in Van Schie et al. is provided in order to create the curved shape of the Van Schie et al. device. Basically, a thread like material is run circumferentially around the Van Schie device in order to impose curvature within the structure. In contrast, the instant claims recite suture openings passing through the wall thickness of the graft that are required for surgical implantation of the graft.

The rejection of claims 5, 12, and 16 under 35 U.S.C. § 103(a) as being unpatentable over Palmaz et al. in view of Van Schie et al. is improper, and Applicants respectfully request withdrawal of this rejection.

C. Rejection of Claims 6-10 under 35 U.S.C. § 103(a) as being unpatentable over Palmaz et al. in view of Van Schie et al., and further in view of Kula et al.

Claims 6-10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Palmaz et al., in view of Van Schie et al., and further in view of Kula et al. (U.S. Patent No. 6,325,825). Since the Examiner has failed to establish a *prima facie* case of obviousness with respect to independent claims 1 and 13, all claims depending from independent claims 1 and 13 are also nonobvious. Claims 6-10, which depend from independent claim 1, are, therefore, nonobvious.

The Examiner recognizes that the combination of Palmaz et al. and Van Schie et al. “does not disclose the thickness of the undulating regions as less than that of the non-undulating regions.” The Examiner then asserts that “Kula et al. teaches an implantable medical graft having thicker ends, which correspond to the non-undulating regions.” Applicants respectfully disagree. The thicker ends provided in the Kula et al. stent do not correspond to the varying thicknesses of the undulating and non-undulating regions of the claimed graft. As explained in Kula et al.:

“Other modifications at the ends of the stent 10 may include increasing the thickness of wall of the stent 10 and selectively electropolishing. These modifications protect the artery and any plaque from abrasion that may be caused by the stent ends during insertion of the stent 10.”

(Kula et al., col. 4, lines 60-64, underlining added for emphasis.)

Kula provides additional thickness and polishing at the ends of the stent in order to protect vessels from damage caused by the stent ends. This smoothing out of the rough ends of the Kula et al. stent does not correspond to having “the wall thickness of the undulating regions [is] less than the wall thickness of the non-undulating regions” as recited in claim 6. Even with the combination of four references, the Examiner has not provided each element of the claims as required for a proper 35 U.S.C. § 103(a) rejection.

With respect to claim 7, the Examiner acknowledges that none of the combined references teach or suggest the specific thicknesses recited in claim 7. The Examiner, nonetheless, rejects claim 7 as being obvious. Applicants note that the Examiner has not provided any prior art reference that renders the claimed thicknesses obvious.

With respect to claims 9 and 10, the Examiner acknowledges that none of the references teach or even suggest the “generally cruciform-shaped slot pattern” recited in claim 9 or the “generally Y-shaped slot pattern” recited in claim 10. Nonetheless, the Examiner rejects claims 9 and 10 as being obvious. Applicants once again note that the Examiner has failed to provide any prior art reference that would render claims 9 or 10 obvious. Because the Examiner has made these conclusory statements without citing any prior art reference in support of his conclusion, Applicants interpret the Examiner’s statement to be an official notice. Applicants traverse the Examiner’s official notice and request that the Examiner provide evidentiary support for this official notice.

The rejection of claims 6-10 under 35 U.S.C. § 103(a) as being unpatentable over Palmaz et al., in view of Van Schie et al., and further in view of Kula et al. is improper, and Applicants respectfully request withdrawal of this rejection.

D. Rejection of Claim 11 under 35 U.S.C. § 103(a) as being unpatentable over Palmaz et al. in view of Banas et al.

Claim 11 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Palmaz et al. in view of Banas et al. (U.S. Patent No. 5,749,880). As discussed above, the Examiner has failed to establish a *prima facie* case of obviousness with respect to independent claim 1. Since independent claim 1 is nonobvious in view of the prior art, claim 11, which depends from independent claim 1, is also nonobvious.



## CONCLUSION

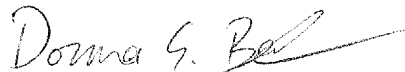
Applicants respectfully request that the Examiner withdraw the rejections of claims 1-16 based on the remarks presented herein. Applicants respectfully renew their request that the Drawing Amendments filed on 17 August 2006 be accepted and that the Examiner so indicate in the next correspondence. Applicants also renew their request for the Examiner to consider the U.S. Patent references cited on page 4/9 of Form PTO-1449 filed on 30 December 2005 and so indicate by returning an initialed copy of page 4/9 of Form PTO-1449 filed on 30 December 2005 to the Applicants with the next correspondence. For the Examiner's reference, a copy of Form PTO-1449 filed on 30 December 2005, which was returned by the Examiner with the Office Action mailed on 27 April 2006, is attached to this Response.

Any amendments made during the prosecution of this application are intended solely to expedite prosecution of the application and are not to be interpreted as acknowledgement of the validity of any rejection raised earlier in prosecution, nor as acknowledgement that any citation made against the application is material to the patentability of the application prior to amendment.

This Response is being filed with a Request for Extension of Time for one (1) month under 37 C.F.R. § 1.136(a)(1) and the appropriate fee set forth in 37 C.F.R. § 1.17(a). No additional fees are believed necessitated by the filing of this Response. Should any such additional fees be required, the Director is hereby authorized to deduct them from Deposit Account No. 18-2000, of which the undersigned is an authorized signatory.

Should the Examiner believe that there are any outstanding matters capable of resolution by a telephone interview, the Examiner is encouraged to telephone the undersigned attorney of record.

Respectfully submitted

A handwritten signature in cursive script, appearing to read "Donna E. Becker", with a long horizontal flourish extending to the right.

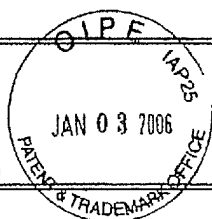
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June 12, 2007

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Docket No. 6006-157

FORM PTO - 1449 (Modified)  
List of Patents and Publications  
For Applicant's Information  
Disclosure Statement  
(Use Several Sheets if Necessary)



ATTORNEY DOCKET NO: 6006-157  
APPLICANT: Banas, et al.  
FILING DATE: 5/6/04  
SERIAL NO: 10/840,205  
GROUP: 3731

### U.S. PATENT DOCUMENTS

| Examiner's<br>Initials | Ref.<br>Desig. | Document<br>Number | Date     | Name              | Class | Subclass |
|------------------------|----------------|--------------------|----------|-------------------|-------|----------|
| TB                     | AA1            | 5,824,056          | 10/20/98 | Rosenberg         | 623/1 | 606/191  |
|                        | AB1            | 5,849,206          | 12/15/98 | Amon, et al.      | 216   | 37       |
|                        | AC1            | 5,765,418          | 6/16/98  | Rosenberg         | 72    | 47       |
|                        | AD1            | 5,873,904          | 2/23/99  | Ragheb, et al.    | 623   | 1        |
|                        | AE1            | 5,725,573          | 3/10/98  | Dearnaley, et al. | 623   | 2        |
|                        | AF1            | 5,605,714          | 2/25/97  | Dearnaley, et al. | 427   | 2.24     |
|                        | AG1            | 4,846,834          | 7/11/89  | von Recum, et al. | 623   | 66       |
|                        | AH1            | 4,751,099          | 6/14/88  | Niino, et al.     | 427   | 34       |
|                        | AI1            | 5,962,138          | 10/5/99  | Kolluri, et al.   | 428   | 411.1    |
|                        | AJ1            | 5,782,910          | 7/21/98  | Davidson          | 623   | 3        |
|                        | AK1            | 6,103,320          | 8/15/00  | Matsumoto, et al. | 427   | 535      |

### FOREIGN PATENT DOCUMENTS

| Ref.<br>Desig. | Document<br>Number | Date     | Country | Class | Subclass | Trans.<br>Yes No |
|----------------|--------------------|----------|---------|-------|----------|------------------|
| AL1            | 01/53559           | 26.07.01 | WIPO    | C23C  | 14/14    |                  |
| AM1            | 01/55473           | 02.08.01 | WIPO    | C23C  | 14/00    |                  |
| AN1            | 97/07257           | 27.02.97 | WIPO    | C23C  | 14/00    |                  |
| AO1            | 00/04204           | 1/24/00  | WIPO    | C23C  | 14/34    |                  |
| AP1            | 00/54704           | 9/21/00  | WIPO    | A61F  | 2/06     |                  |

### OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

AR1 "Multilayer Ceramic/Metallic Coatings by Ion Beam-Assisted, Electron Beam Physical Vapor (EB-PVD) Deposition, Penn State Applied Research Laboratory, pp. 1-4 (1997)

AS1 "The Effects of Ion Irradiation on NiTi Shape Memory Alloy Thin Films" by F. Goldberg and E. Knystautas, Proceedings of the Second International Conference on Shape Memory and Superelastic Technologies Asilomar Conference Center, Pacific Grove, California, USA, pp. 177-182 (1997)

AT1 "Vacuum Conditions for Sputtering Thin Film TiNi", Journal of Vacuum Science and Technology, JVST A Online, pp. 1-2 (Abstract view)

EXAMINER

DATE CONSIDERED

4/19/06

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw a line through citation if not in conformance and not considered. Include a copy of this form with next communication to applicant.

**FORM PTO - 1449 (Modified)**

List of Patents and Publications  
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ATTORNEY DOCKET NO: 6006-157

APPLICANT: Banas, et al.

FILING DATE: 5/6/04

SERIAL NO: 10/840,205

GROUP: 3731

**U.S. PATENT DOCUMENTS**

| Examiner's<br>Initials | Ref.<br>Desig. | Document<br>Number | Date     | Name              | Class | Subclass |
|------------------------|----------------|--------------------|----------|-------------------|-------|----------|
| TB                     | AA2            | 5,735,896          | 4/7/98   | Amon, et al.      | 623   | 11       |
|                        | AB2            | 5,723,219          | 3/3/98   | Kolluri           | 428   | 411.1    |
|                        | AC2            | 5,824,045          | 10/20/98 | Alt               | 623   | 1        |
|                        | AD2            | 5,277,933          | 1/11/94  | Claar, et al.     | 427   | 248      |
|                        | AE2            | 5,084,151          | 1/28/92  | Vallana           | 204   | 192.11   |
|                        | AF2            | 5,855,955          | 1/5/99   | Claar, et al.     | 427   | 248.1    |
|                        | AG2            | 5,607,463          | 3/4/97   | Schwartz, et al.  | 623   | 1        |
|                        | AH2            | 5,609,629          | 3/1/97   | Fearnott, et al.  | 623   | 1        |
|                        | AI2            | 5,858,556          | 1/12/99  | Eckert, et al.    | 428   | 586      |
|                        | AJ2            | 6,274,014          | 8/14/01  | Matsumoto, et al. | 204   | 2998.11  |
| TB                     | AK2            | 5,690,670          | 11/25/97 | Davidson          | 606   | 198      |

**FOREIGN PATENT DOCUMENTS**

| Ref.<br>Desig. | Document<br>Number | Date     | Country | Class | Subclass | Trans.<br>Yes No |
|----------------|--------------------|----------|---------|-------|----------|------------------|
| AL2            | 01/21852           | 3/29/01  | WIPO    | C23C  | 14/34    |                  |
| AM2            | 01/43790           | 6/21/01  | WIPO    | A61L  | 33/02    |                  |
| AN2            | 01/55473           | 8/2/01   | WIPO    | C23C  | 14/00    |                  |
| AO2            | 01/21851           | 3/29/01  | WIPO    | C23C  | 14/34    |                  |
| AP2            | 97/44692           | 11/27/97 | WIPO    | G02B  | 6/16     |                  |

**OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)**

AR2 "Relative importance of bombardment energy and intensity in ion plating", K.S. Fancey, et al., Journal of Vacuum Science & Technology A: Vacuum, Surfaces and Films, Vol. 13, Issue 2, pp. 428-435 (Abstract view) March 1995

AS2 "Thin Film Shape Memory Microvalves with Adjustable Operation Temperature" by Kohl, Dittmann, Quandt and Winzek, Sensors and Actuators, Vol 83, pp. 214-219, (2000)

AT2 "Multicomponent Film Deposition by Target Biasing", IBM Technical Disclosure Bulletin, pp. 1-2 (July 1980)

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4/19/06

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|------------------------|----------------|--------------------|---------|------------------|-------|----------|
| TB                     | AA3            | 4,510,182          | 4/9/85  | Cornils, et al.  | 427   | 162      |
|                        | AB3            | 5,782,908          | 7/21/98 | Cahalna, et al.  | 623   | 1        |
|                        | AC3            | 5,932,299          | 8/3/99  | Katoot           | 427   | 508      |
|                        | AD3            | 5,683,453          | 11/4/97 | Palnaz           | 623   | 1        |
|                        | AE3            | 5,593,442          | 1/14/97 | Klein            | 623   | 12       |
|                        | AF3            | 6,458,152          | 10/1/02 | Khosravi, et al. | 623   | 001.13   |
|                        | AG3            | 5,945,153          | 8/31/99 | Dearnaley        | 427   | 2.12     |
|                        | AH3            | 5,049,251          | 9/17/91 | Inone            | 204   | 192      |
|                        | AI3            | 5,540,820          | 7/30/96 | Terakado, et al. | 204   | 192.3    |
|                        | AJ3            | 5,843,289          | 12/1/98 | Lee, et al.      | 204   | 192      |
|                        | AK3            | 5,728,150          | 3/17/98 | McDonald, et al. | 623   | 1        |

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| Ref.<br>Desig. | Document<br>Number | Date    | Country | Class | Subclass | Trans.<br>Yes No |
|----------------|--------------------|---------|---------|-------|----------|------------------|
| AL3            | 99/23977           | 5/20/99 | WIPO    | A61F  | 2/06     |                  |
| AM3            | 99/62432           | 12/9/99 | WIPO    | A61F  | 2/06     |                  |
| AN3            | 1452370            | 3/21/74 | Germany | C21C  | 37/15    |                  |
| AO3            | 0 400 947          | 5/29/90 | Europe  | C23C  | 16/00    |                  |
| AP3            | 0 442 303          | 1/25/91 | Europe  | C23C  | 16/26    |                  |

**OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)**

AR3 "Oriented nickel-titanium shape memory alloy films prepared by annealing during deposition" by Kathleen Gisser, et al., Applied Physics Letters, Vol. 61, Issue 14, pp. 1632-1634 (Abstract View)

AS3 "Thin Film Shape Memory Alloy Microactuators" by TiNi Alloy Company (online)

AT3 "A Concise History of Vacuum Coating Technology, Part 2: 1940 to 1975" by D. Mattox, [www.svc.org/HistoryofVac2.html](http://www.svc.org/HistoryofVac2.html), pp 1-15

EXAMINER

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|------------------------|----------------|--------------------|----------|-------------------|-------|----------|
|                        | AA4            | 5,843,120          | 12/1/98  | Israel, et al.    | 606   | 198      |
|                        | AB4            | 6,013,054          | 1/11/00  | Jiun Yan          | 604   | 096      |
|                        | AC4            | 6,113,750          | 9/5/00   | Shinmura, et al.  | 204   | 192.15   |
|                        | AD4            | 6,120,536          | 9/19/00  | Ding, et al.      | 623   | 011.43   |
|                        | AE4            | 01/0039449         | 11/8/01  | Johnson, et al.   | 623   | 1.19     |
|                        | AF4            | 6,207,536          | 3/27/01  | Matsumoto, et al. | 438   | 478      |
|                        | AG4            | 6,287,277          | 9/11/01  | Yan               | 604   | 096.01   |
|                        | AH4            | 6,287,435          | 9/11/01  | Drewery, et al.   | 204   | 298.09   |
|                        | AI4            | 6,290,721          | 9/18/01  | Heath             | 623   | 1.15     |
|                        | AJ4            | 6,293,967          | 9/25/01  | Shanley           | 623   | 1.15     |
|                        | AK4            | 01/0032013         | 10/18/01 | Marton            |       |          |

**FOREIGN PATENT DOCUMENTS**

| Ref.<br>Desig. | Document<br>Number | Date    | Country | Class | Subclass | Trans.<br>Yes No |
|----------------|--------------------|---------|---------|-------|----------|------------------|
| AL4            | 11267462           | 10/5/99 | Japan   | B01D  | 59/34    |                  |
| AM4            | 51055724           | 5/17/76 | Japan   | C22C  | 01/02    |                  |
| AN4            | 01/56502           | 8/9/01  | WIPO    | A61F  | 2/06     |                  |
| AO4            |                    |         |         |       |          |                  |
| AP4            |                    |         |         |       |          |                  |

**OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)**

AR4 "Constitutive Parts of a Shape Memory Alloy Titanium Nickel Thin Film Catheter" by L. Buchailot, et al., Proceedings of the Second International Conference on Shape Memory and Superelastic Technologies Asilomar Conference Center, Pacific Gove, California, USA, pp. 183-188 (1997)

AS4 "The Characteristics of NiTi HCD-Deposited SMA Films" by H. Weixin, et al., Proceedings of the Second International Conference on Shape Memory and Superelastic Technologies Asilomar Conference Center, Pacific Gove, California, USA, pp. 167-172 (1997)

AT4 "Microstructure of Ti-Rich TiNi Thin Films" by A. Ishida, et al., Proceedings of the Second International Conference on Shape Memory and Superelastic Technologies Asilomar Conference Center, Pacific Gove, California, USA, pp. 161-166 (1997)

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FORM PTO - 1449 (Modified)  
List of Patents and Publications  
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ATTORNEY DOCKET NO: 6006-157  
APPLICANT: Banas, et al.  
FILING DATE: 5/6/04  
SERIAL NO: 10/840,205  
GROUP: 3731

### U.S. PATENT DOCUMENTS

| Examiner's<br>Initials | Ref.<br>Desig. | Document<br>Number | Date     | Name            | Class | Subclass |
|------------------------|----------------|--------------------|----------|-----------------|-------|----------|
| AB                     | AA5            | 6,312,463          | 11/6/01  | Rourke, et al.  | 623   | 1.39     |
|                        | AB5            | 6,331,191          | 12/18/01 | Chobotov        | 623   | 1.44     |
|                        | AC5            | 5,242,710          | 9/7/93   | Claar, et al.   | 427   | 248      |
|                        | AD5            | 5,647,858          | 7/15/97  | Davidson        | 604   | 264      |
|                        | AE5            | 5,690,670          | 11/25/97 | Davidson        | 606   | 198      |
|                        | AF5            | 5,772,864          | 6/30/98  | Moller, et al.  | 205   | 73       |
|                        | AG5            | 5,387,247          | 2/7/95   | Vallana, et al. | 623   | 2        |
|                        | AH5            | 5,972,018          | 10/26/99 | Israel, et al.  | 606   | 198      |
|                        | AI5            | 5,061,914          | 10/29/01 | Busch, et al.   | 337   | 140      |
|                        | AJ5            | 6,096,175          | 8/1/00   | Roth            | 204   | 192      |
| AB                     | AK5            | 5,133,845          | 7/28/92  | Vallana, et al. | 204   | 192      |

### FOREIGN PATENT DOCUMENTS

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|----------------|--------------------|------|---------|-------|----------|------------------|
| AL5            |                    |      |         |       |          |                  |
| AM5            |                    |      |         |       |          |                  |
| AN5            |                    |      |         |       |          |                  |
| AO5            |                    |      |         |       |          |                  |
| AP5            |                    |      |         |       |          |                  |

### OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

AR5 "The Experimental Use of Steel Mesh Tubes for the Replacement of Arterial Segments," by Larry, Banning G., M.D., et al., Presented at the Third Scientific Meeting of the North American Chapter of the International Society of Angiology, Atlantic City, NJ, pp. 69-75 (June 4, 1955)

AS5 "Progress in Thin Film Shape Memory Microactuators," by Johnson, et al., [www.sma-mems.com/recent.htm](http://www.sma-mems.com/recent.htm) (Overview), pp. 105

AT5 "A Concise History of Vacuum Coating Technology, Part 2: 1940 to 1975," by D. Mattox, [www.svc.org/History/vac2.html](http://www.svc.org/History/vac2.html), pp. 1-5

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|------------------------|----------------|--------------------|----------|--------------------|-------|----------|
| 113                    | AA6            | 5,685,961          | 11/11/97 | Pourrezaei, et al. | 204   | 192      |
|                        | AB6            | 5,855,802          | 1/5/99   | Acciai, et al.     | 216   | 8        |
|                        | AC6            | 5,951,881          | 9/14/99  | Rogers, et al.     | 216   | 41       |
|                        | AD6            | 5,421,955          | 6/6/95   | Lau, et al.        | 216   | 48       |
|                        | AE6            | 5,158,750          | 10/27/92 | Finicle            | 422   | 102      |
|                        | AF6            | 6,124,523          | 9/26/00  | Banas, et al.      | 623   | 11       |
|                        | AG6            | 6,039,755          | 3/21/00  | Edwin, et al.      | 623   | 1        |
|                        | AH6            | 5,902,332          | 5/11/99  | Schatz             | 623   | 1        |
|                        | AI6            | 5,928,279          | 7/27/99  | Shannon, et al.    | 623   | 1        |
|                        | AJ6            | 5,735,892          | 4/7/98   | Myers, et al.      | 623   | 1        |
| 113                    | AK6            | 6,383,214          | 5/7/02   | Banas, et al.      | 623   | 1.14     |

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| AL6            |                    |      |         |       |          |                  |
| AM6            |                    |      |         |       |          |                  |
| AN6            |                    |      |         |       |          |                  |
| AO6            |                    |      |         |       |          |                  |
| AP6            |                    |      |         |       |          |                  |

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AR6 "Model Surfaces for Studying and Controlling the Adhesion of Cells" by M. Mrksich, AVS 47<sup>th</sup> International Symposium, Invited Paper No. BI+EL-TuA1 (October 3, 2000)

AS6 "Cell Response to Chemically and Topographically Modified Surfaces" by D.S. Sutherland, et al., AVS 47<sup>th</sup> International Symposium, Invited Paper No. BI+EL-TuA3 (October 3, 2000)

AT6 "Tissue Formation of Hepatocytes on Micro-Porous Films of Polylactide" by T. Nishikawa, et al., AVS 47<sup>th</sup> International Symposium, Invited Paper No. BI+EL-TuA10 (October 3, 2000)

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|------------------------|----------------|--------------------|----------|-------------------|-------|----------|
| TB                     | AA7            | 6,451,047          | 9/17/02  | McCrea, et al.    | 623   | 1.13     |
|                        | AB7            | 6,264,684          | 7/24/01  | Banas, et al.     | 623   | 1.13     |
|                        | AC7            | 5,984,905          | 11/16/99 | Dearnaley, et al. | 604   | 265      |
|                        | AD7            | 5,370,684          | 12/6/94  | Vallana, et al.   | 623   | 1        |
|                        | AE7            | 5,545,210          | 8/13/98  | Hess, et al.      | 623   | 1        |
|                        | AF7            | 4,739,762          | 4/26/88  | Palmaz            | 604   | 104      |
|                        | AG7            | 4,733,665          | 3/29/88  | Palmaz            | 604   | 104      |
|                        | AH7            | 4,776,337          | 10/11/98 | Palmaz            | 623   | 1        |
|                        | AI7            | 5,102,417          | 4/7/92   | Palmaz            | 604   | 8        |
|                        | AJ7            | 03/0004567         | 1/2/03   | Boyle, et al.     | 623   | 195      |
| TB                     | AK7            | 03/0028246         | 2/6/03   | Palmaz, et al.    | 623   | 1.13     |

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|----------------|--------------------|------|---------|-------|----------|------------------|
| AL7            |                    |      |         |       |          |                  |
| AM7            |                    |      |         |       |          |                  |
| AN7            |                    |      |         |       |          |                  |
| AO7            |                    |      |         |       |          |                  |
| AP7            |                    |      |         |       |          |                  |

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AR7 "Endothelial Cell Organization on Micropatterned Protein Surfaces" by R. Daw, et al., AVS 47<sup>th</sup> International Symposium, Invited Paper No. BI-WeP21 (October 4, 2000)

AS7 "The Nanomechanical Properties of Thin Films" by J.E. Houston, AVS 47<sup>th</sup> International Symposium, Invited Paper No. TF-TuA1 (October 3, 2000)

AT7 "Porous and nonporous polycarbonate Urethane stent-grafts for TIPS formation: biologic responses (abstract)" by Z.J. Haskal and L.J. Brennecke, J. Vasc. Interv. Radiol, Vol. 10, No. 9, pp. 1255-1263 (October 1999)

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|------------------------|----------------|--------------------|----------|-----------------|-------|----------|
| 113                    | AA8            | 6,264,687          | 7/24/01  | Tomonto         | 623   | 1.16     |
| 113                    | AB8            | 01/0021870         | 9/13/01  | Edwin, et al.   | 623   | 1.19     |
| 113                    | AC8            | 5,423,885          | 6/13/95  | Williams        | 623   | 1        |
| 113                    | AD8            | 02/0156522         | 10/24/02 | Ivancev, et al. | 623   | 1.13     |
|                        | AE8            |                    |          |                 |       |          |
|                        | AF8            |                    |          |                 |       |          |
|                        | AG8            |                    |          |                 |       |          |
|                        | AH8            |                    |          |                 |       |          |
|                        | AI8            |                    |          |                 |       |          |
|                        | AJ8            |                    |          |                 |       |          |
|                        | AK8            |                    |          |                 |       |          |

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| AM8            |                    |      |         |       |          |                  |
| AN8            |                    |      |         |       |          |                  |
| AO8            |                    |      |         |       |          |                  |
| AP8            |                    |      |         |       |          |                  |

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AR8 "Primary Implantation of Polyester-Covered Stent-Grafts for Transjugular Intrahepatic Portosystemic Stent Shunts (TIPSS): A Pilot Study" by Manfred Cejna, et al., Cardiovasc Intervent Radiol, Vol. 22, pp. 305-310 (1999)

AS8 "Sputtering Targets High-Quality Thin Film Materials" by AMETEK Specialty Metal Products online at [www.ametek84.com/fd-sputtering.html](http://www.ametek84.com/fd-sputtering.html), pp. 1-3

AT8 "The influence of ion irradiation during film growth on the chemical stability of film/substrate systems" by W. Ensinger, Surface and Coatings Technology, Vol. 80, pp. 35-48 (1996)

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ADDED PAGE

1. "Anomalous Plastic and Elastic Behaviors of Sputter-deposited TiN with 10 or 20 Inserted Thin Al Layers Evaluated by Nanoindentation" by E. Kusano, et al., AVS 47<sup>th</sup> International Symposium, Paper No. TF-TuA3 (October 3, 2000)
2. "Recent Progress in the Application of Thin Film Shape Memory Alloys" by A.D. Johnson and J.D. Busch, Proceedings of the First International Conference on Shape Memory and Superelastic Technologies Asilomar Conference Center, Pacific Grove, California, USA, pp. 299-310 (1994)
3. "Shape Memory Properties in NiTi Sputter-deposited Film", by J.D. Busch and A.D. Johnson, J Appl. Phys, Vol. 68, No. 12, pp. 6224-6226 (December 15, 1990)
4. "Thin-film Processing of TiNi Shape Memory Alloy" by J.A. Waker and K.J. Gabriel, Sensors and Actuators, A21-A23, pp. 243-246 (1990)
5. "Sputter-deposition of TiNi, TiNiPd and TiPd films displaying the two-way shape-memory effect" by E. Quandt, et al., Sensors and Actuators, A 53, pp. 434-439 (1996)
6. "Applications of Shape-Memory Alloy Thin Films" by A.D. Johnson and V.V. Martynov, Proceedings of the Second International Conference on Shape Memory and Superelastic Technologies Asilomar Conference Center, Pacific Grove, California, USA, pp. 1-8 (1997)
7. "Liquid Sources for Chemical Vapor Deposition of Group 6 Metals and Metal Nitrides" by Gordon, et al., [www.techtransfer.harvard.edu/cgi-bin/TALSearch.cgi?full\\_report=1&case=3](http://www.techtransfer.harvard.edu/cgi-bin/TALSearch.cgi?full_report=1&case=3), Case Number 1709
8. "Stents: Literature," <http://www.phytis.com/liter.htm>, pp. 1-8

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